

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) For use in an ultra wideband (UWB) communication system, a method for communicating binary data, having logical "0" and "1" value types, as a sequence of UWB pulses each including a carrier signal, the method comprising:

encoding binary data of one value type as positive UWB pulses and binary data of the other value type as negative UWB pulses having an inverted carrier phase; and
sensing whether a carrier phase of a received UWB pulse is inverted or not;
rectifying and filtering the received UWB pulse to provide a unidirectional signal;
adjusting the polarity of the unidirectional signal based on whether the sensed carrier phase is inverted or not; and

detecting the presence of positive and negative UWB pulses binary data of the adjusted unidirectional signal using a zero-amplitude sensing threshold, thereby increasing immunity to noise.

2-3. (Cancelled)

4. (Currently Amended) A method as defined in claim [[3]] 1, wherein:

the UWB pulses are generated in predetermined time slots; and
the method further comprises assigning portions of each time slot to respective communication channels, whereby data signals pertaining to multiple communication channels are transmitted in a single time slot.

5. (Original) A method as defined in claim 4, wherein:

each UWB pulse time slot has two half time slots;

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data signals pertaining to first and second communication channels are encoded in the first and second halves, respectively, of each UWB pulse time slot.